NHS Grampian

Job Description

SECTION 1

JOB IDENTIFICATION	
Job Title:	Senior Pharmacy Technician
Department(s):	Radiopharmacy
Location:	Aberdeen Royal Infirmary
Hours:	37 Hours Per Week
Grade:	Band 6
Salary:	£39,912 - £48,635 Pro Rata, Per Annum
Contract:	Permanent

2. Job Purpose

Organises the daily running of staff and facilities within the Radiopharmacy Department in accordance with the regulatory requirements contained in the European Guides to Good Pharmaceutical Manufacturing Practice and local rules for Ionising Radiation Regulations (IRR99).

3. Organisational Position

Radiopharmacy Team Leader
I
Senior Radiopharmacy Lead Technician
I
Rotational Pharmacy Staff
I
Pharmacy Assistant

As part of the Pharmacy, the following staff groups rotate through the Radiopharmacy for education and training in Radiopharmacy practice – Pharmacists, Pre-registration Pharmacists, Pharmacy Technicians, Student Pharmacy Technicians, trainee Physicists.

4. Scope and Range

The radiopharmacy department provides long and short lived oral and I/V radioactive pharmaceuticals to the nuclear medicine department. These departments service patients from NHS Grampian, NHS Orkney and NHS Shetland. The department dispenses around 8,000 injections per annum. Most I/V injections are prepared using aseptic technique employing closed procedures. In addition blood components (e.g. radiolabelling of autologous red blood cells, leukocytes, platelets) are prepared aseptically using 'open' procedures.

To support the above quality control procedures are required, including radiochemical purity testing and instrument calibration checks.

Records of radioactive stock and waste disposal for each dose must be maintained to comply with the Radioactive Substances Act.

The post holder will receive training to be appointed as one of the Radiation Protection Supervisors for the department.

The post holder will be expected to have key role in the maintenance of the Radiopharmacy Quality Management System.

5. Main duties/responsibilities

1. Radiopharmacy Dispensing (40%)

- The Senior Technician is responsible for the daily running of the service, by interpreting requests from nuclear medicine to ensure correct purchase and dispensing of radiopharmaceuticals. This includes the planning and allocation of workload and organising daily dispensing sessions for patient specific medicines required at specific appointment times. This involves:
  - Generating relevant documentation – scanning lists, dose request forms and dispensing worksheets.
  - Carrying out or checking patient dose calculations – involving exponential radioactive decay calculations.
  - Preparing materials for dispensing sessions e.g. radiopharmaceutical kits, syringes, needles etc.
  - Dispensing of radiopharmaceuticals and radiolabelling autologous blood components.
  - Measuring and labelling prepared doses.
- Identify and act to resolve any problems with the technical Radiopharmacy service involving:
  - the operation of the plant and any equipment
  - supply problems
  - staffing problems
  - explain service problems and delays to customers and liase with professional and technical staff from other departments to assure a quality service and to resolve problems.
- Maintain the Radiopharmacy database to ensure compliance with GMP documentation systems and Radioactive Substances Act requirements.
- In conjunction with the Radiopharmacist, manage the introduction and implementation of change relating to new equipment, processes, practices, legislation or guidance so that the required outcomes are achieved. This includes participation in internal and external audits in order to adhere to clinical governance commitments.

2. Procurement and finance (10%)

- In conjunction with the Radiopharmacist, make decisions regarding purchases in order to ensure cost effective running of the service, which includes:
  - Providing the pharmacy purchasing department with information for ordering radio-pharmaceuticals in accordance with the contract agreements in place.
  - Make recommendations on other alternative suppliers in event of supply problems.
  - Interpretation of radioactivity reference dating systems with associated decay calculations. It must be ensured that the amount of radioactivity is sufficient for requirements.
  - Choosing the fit for purpose and cost effective product.
- Receive stock into the department and maintain stock and financial records for goods received.
- Ensuring adequate stocks of equipment and materials are maintained. Write requisitions for supplies as required using NHS procurement systems.

2. Radiopharmacy Quality Control Procedures (10%)

- Monitor, analyse and evaluate technical work of the department to ensure a safe, efficient and cost effective service and ensuring that staff work safely and effectively in accordance with relevant legislation, e.g. Good Manufacturing Practice (GMP) and the Scottish Environmental Protection Radioactive Substances Act. Plan and carry out implementation of agrees changes, identifying and managing any risks involved.
- Radionuclidic purity determination, radiochemical purity determination of radiopharmaceuticals.
- Perform calibration tests on complex equipment and maintain a system of calibration checks on that equipment.
- Develop, review and write Standard Operating Procedures including proposing changes to procedures for the improvement of the service. Ensures members of staff follow Standard Operation Procedures and carry out new procedures.
- Maintenance of environmental monitoring and validation procedures.
- Maintenance of workload statistics.
- In conjunction with the Quality Assurance department, ensure that the appropriate monitoring

(environmental, physical and microbial) is carried out and the results are acted upon within the approved time frame.
- Ensure that the Radiopharmacy maintains good control systems for the documentation generation, use and storage.
- Maintenance of the Radiopharmacy Quality Management System – including CAPA analysis, completion of 'Change Control' procedures, deviation management and error analysis.

4. Radiation Protection Procedures (20%)
- Waste management in accordance with both local rules and procedures appropriate for compliance with the Environmental Authorisations (Scotland) Regulations 2018. Monitoring, disposal and record keeping of radioactive stock. Maintaining records for the receipt and disposal of radioisotopes using the Radiopharmacy database and paper records.
- Ensure that ordered radioactive stock does not exceed limits imposed by the Scottish Environmental Protection Agency (SEPA) to comply with the Environmental Authorisations (Scotland) Regulations 2018.
- Preparing monthly reports for workload statistics, waste reports for radioactive waste management and radioisotope stock levels for use by the Radiation Protection. These are required to ensure compliance with the Radioactive Substances Act.
- RPS – ensuring adherence to the Local Rules as defined under the Ionising Radiation Regulations
- The issuing of monitoring equipment to allow radiation dose measurement and maintenance of related report records in accordance with the Radioactive Substances Act.

5. Management, Training and education (20%)
- Will have day to day management responsibilities for the technicians and assistants
- Plan and organise training for staff
- Training Pharmacists, pre-registration Pharmacists, rotational Pharmacy Technicians, Student Pharmacy Technicians, Pharmacy assistants and trainee Physicists in:
  aseptic technique in general as well as the specific complications of handling radioactivity and blood components
  calculations
  aseptic dispensing
  quality control of radiopharmaceuticals, using specialist electronic instruments and equipment
- Responsible for maintaining own competency to practice through CPD activities and maintain a portfolio that reflects personal development.

6. Systems and equipment

Systems of work are controlled under:
- The EC Guide to Good Manufacturing
- The Department of Health document 'Aseptic Dispensing for NHS patients'
- The Ionising Radiation Regulations 1999 local rules
- Scottish Environmental Protection Agency Regulations
- Administration of Radioactive Substances Advisory Committee Regulations
- In house training folders
- QA procedural systems such as Standard Operating Procedures and Standard Dispensing Records controlled using Q-pulse quality management system.
- CMM computer system
- Using and maintaining Radiopharmacy Database
- Working knowledge of cleanrooms as per GMP

Equipment
- Scanlaf BS EN 124694 Class ll safety cabinets
- BS EN Class ll 124694 Amercare isolators
- Capintec ARC 120 radionuclide calibrator
- Capintec CRC-15R radionuclide calibrator
- IEC Centra 3C centrifuge

- Grant SUB6 thermostatically controlled water bath
- Geiger Muller meter type 5.10
- Series 900 scintillation monitor
- Precisa balance
- Lead glass syringe shields
- ^{99m}Tc-generator
- Phosphor Imager and OptiQuant image analysis software
- Labcaire BS EN 124694 Class ll laminar flow safety cabinets
- Air ideal air sampler
- Climet particle counter
- In depth knowledge of departmental standard operating procedures
- Microsoft word for document generation
- Microsoft excel for workload statistics, order processing and tracking and radiation exposure monitoring
- Microsoft power point for presentations

7. Decisions and judgements

The work undertaken by the Senior Technician Radiopharmacy is mainly autonomous, unsupervised and service led under the guidance of Standard Operating Procedures and Pharmacy Policy.

The Senior Technicians decisions and judgements include:

Prioritising and allocating workload to meet needs of service taking into account the accommodation of emergency requests without disrupting the supply of patient specific medicines for specific appointment times.

Using his/her initiative to solve unforeseen service delivery problems.

Implementing agreed changes to working practice and service delivery and identify products most appropriate for purpose and cost effective.

Staff competency / training needs – different grades of staff rotating through the Radiopharmacy Department require differing levels of training.

8. Communication and relationships

The post holder must have good interpersonal skills and be capable of issuing and receiving instructions from a wide variety of NHS staff and suppliers including:

- Nuclear medicine physicists, technicians, nurses and clerical staff
- The radiation protection service
- Pharmacy support services staff
- Radiopharmaceutical, chemical and sundry suppliers
- Portering services for non-radioactive hazardous waste disposal
- Estates

9. Physical demands of the job

- Required to meet Ionising Radiation Regulations Medical for Classified Workers
- Lifting and stretching with lead shielded ^{99m}Tc generator weighing 17Kg (twice weekly).
- Repeated lifting and stretching with trays containing lead shielded vials up to 3Kg per tray.
- Sitting or standing in pharmaceutical workstations within cleanrooms manipulating syringes for 2-3 hour dispensing sessions.
- Concentration for 2 – 3 hour dispensing sessions, dispensing small accurate volumes of short and long half lived radioactivity.
- Daily exposure to unsealed radioactive sources for 2 – 3 hour dispensing sessions.
- Handling unsealed radioactive sources while working under pressure to have patient doses ready

for the appointment time and accommodating emergency doses without disrupting the planned workload, dispensing rapidly to maintain minimal radiation dose exposure, while performing with a high degree of accuracy to ensure correct dose is dispensed.
- Concentration while performing complex calculations.
- Handling toxic chemicals used in QC procedures.
- Handling blood samples were viral status is uncertain (includes samples contaminated with HIV and the Hepatitis viruses).
- Use of technical pharmacy equipment as described in number 6.
- Keyboard skills.

10. Most challenging/difficult parts of the job

- Working under pressure with unsealed radioactive sources whilst still trying to achieve high pharmaceutical standards and best radiological practice.
- Responding to emergency requests whilst still being able to maintain planned workload to ensure medicines are prepared in time for the existing patient's appointment time. In some cases this may require re-calculation of radioactivity required for some injections during very time pressured working periods or some patient's appointment time may have to be re-scheduled to accommodate the emergency request.
- Resolving supply issues and discussing these problems with other departments. This may impinge on the service they can provide and involve re-scheduling of patient appointments.
- Prioritising and managing workload within the limits of the skill mix.

11. Knowledge, training and experience required to do the job

Education
- Diploma in Pharmacy Services (or equivalent).
- Significant hospital radiopharmacy/aseptic services experience.
- Pharmacy Technology and Quality Assurance (PTQA) Postgraduate Certificate (PGCert) or MSc
- Have or be willing to work towards the postgraduate certificate in radiopharmacy.
- Registered Pharmacy Technician with the General Pharmaceutical Council.

Training and experience
- Pharmacy aseptic training in accordance with GMP.
- Working knowledge of GMP and IRR99.
- Knowledge of hazards associated with handing of radioactive materials and how to minimise the radiation exposure.
- Knowledge of hazards associated with handing blood components where viral status is uncertain.
- Working knowledge of Microsoft word, excel, access and power point

Desirable
- Previous radiopharmacy experience
- Radiopharmaceutical formulation and the effects of dilution, radioactive capacity and their risk to microbiological contamination.
- Different types of radioactive decay including exponential decay calculations.
- Knowledge of intended use of products.
- Knowledge of specialised procurement problems associated with:-
  - Reference dating systems to ensure the correct activity is administered
  - Formulation differences between similar products
  - Delivery arrangements involving security policies
  - Storage conditions and their consequences
- Quality control analytical techniques, their correct application and interpretation of their results.

NHS GRAMPIAN
PERSON SPECIFICATION

POST/GRADE: Senior Pharmacy Lead Technician – Band 6 – Radiopharmacy

LOCATION/HOSPITALS: ABERDEEN ROYAL INFIRMARY – NHS Grampian

WARD/DEPARTMENT: PHARMACY

The Person Specification should meet the demands of the job and comply with current legislation. Setting unnecessary standards may, for example, unfairly discriminate against one sex, the disabled or minority racial groups. Applicants should be assessed in relation to their ability to meet the real requirements of the job as laid down in the job description. Shortlisted candidates **MUST** possess all the essential components as detailed below.

ATTRIBUTES	ESSENTIAL	DESIRABLE
Qualifications	Diploma in Pharmacy Services (or equivalent). Professional Registration as a Pharmacy Technician with the General Pharmaceutical Council.	Pharmacy Technology and Quality Assurance (PTQA) Postgraduate Certificate (PGCert) or MSc
Experience	Substantial and relevant post qualification experience of pharmacy practice which must include aseptic services. Experience of team management.	Knowledge of Radio-pharmacy
Special Aptitudes / Abilities	Effective verbal and written communication skills. Ability to train and assess other staff. Ability to work under pressure accurately, ability to self-motivate and communicate effectively. Able to work within stringent safety guidelines and to interpret and apply these to daily work practice. Able to make decisions based on knowledge and experience.	Understanding of Cleanroom controls
Disposition	Able to work closely with multidisciplinary team. Good communication skills. Work as a role model. Enthusiastic.	Confident, pleasant, outgoing
Physical Requirements	Good general health. Required to meet Ionising Radiation Regulations (IRR) medical for Classified Workers. Some lifting required for daily tasks. Able to work within the confines of cleanrooms and able to carry out manipulations safely.	
Particular Requirements of the Post	Proven time-management and organisational skills. Self motivated. Ability to prioritise work within the department.	

MAJOR RISKS IN DOING THIS JOB

Please indicate the major risks the job holder could face in doing this job e.g. lifting patients/objects, working with hazardous substances, dealing with violence and aggression
Working with radioactive pharmaceuticals, working with chemicals & handling patient's blood.
Lifting heavy lead containers.
If there are no major risks for the job holder please tick this box ☐